REMARKS

Entry of this Amendment is proper because it narrows the issues on appeal and does not require further search and/or consideration by the Examiner.

Claims 38 and 39 are all the claims presently pending in the application. Claims 38 and 39 are amended to more particularly define the invention. No new matter is added.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicants specifically state that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claim 38 stands provisionally rejected on the ground of nonstatutory double patenting over claims 1-5, 8-11, 16-21, 39-42, and 44 of copending Application No. 12/062,211.

With respect to the prior art, claims 38 and 39 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Dai (U.S. Patent Publication No. 2005/0049848 A1) in view of Autrey et al. (U.S. Patent No. 5,774,695, hereinafter "Autrey").

This rejection is respectfully traversed in the following discussion.

I.   THE CLAIMED INVENTION

An exemplary aspect of the claimed invention (e.g., as recited in claim 38) is directed to a computer system, including a local area network (LAN), a plurality of computers without on-board user interface controllers, each of the plurality of computers being coupled to the LAN and being in communication with each other over the LAN, each of the plurality of computers including at least one central processing unit (CPU) and a system controller being coupled to the at least one CPU, a console including a user input device and a user output device, the console being coupled to communicate over the LAN such that the console encapsulates an input received via the user input device into incoming data frames, conveys the incoming data frames over the LAN to each of the plurality of computers, de-encapsulates outgoing data frames received by the console from each of the plurality of computers over the LAN into an output for display using the user output device, and a plurality of input/output (I/O) devices being coupled to the LAN, the plurality of I/O devices including the user input device and the user output device of the console, each of the plurality of

computers being in communication with the plurality of I/O devices over the LAN. The plurality of computers and the console are arranged to communicate over the LAN by transmitting Layer 2 data frames. The plurality of computers and the console are arranged to convey the input and the output by tunneling over Layer 2 on the LAN. The plurality of computers and the console are arranged to encapsulate the input and output in Internet Protocol (IP) packets for transmission over the LAN. The plurality of computers and the console are arranged to encapsulate the input and output using an application-layer protocol. The plurality of computers are arranged to transmit the outgoing data frames over the LAN to the plurality of I/O devices. Each of the plurality of computers further includes a plurality of on-board I/O device controllers, consisting of at least one LAN interface being directly coupled to the LAN and connected to the system controller, and an emulation processor, the emulation processor being directly coupled to the system controller, the emulation processor including I/O trap logic being directly coupled to the system controller, the I/O trap logic being configured to intercept and trap a plurality of outputs sent by the at least one CPU to the plurality of I/O devices, to pass a plurality of inputs received from a service processor of the emulation processor to the at least one CPU via the system controller, and to emulate behavior of the plurality of I/O devices to the at least one CPU and the system controller, and the service processor being directly coupled to the I/O trap logic, the service processor being configured to receive the intercepted and trapped plurality of outputs from the I/O trap logic, to encapsulate the received plurality of outputs into the outgoing data frames, to transmit the outgoing data frames via the at least one LAN interface through the LAN for delivery to the plurality of I/O devices, to receive the incoming data frames via the at least one LAN interface sent by the plurality of I/O devices through the LAN, to de-encapsulate the received incoming data frames into the plurality of inputs, and to convey the plurality of inputs to the I/O trap logic for emulation to the at least one CPU via the system controller. The emulation processor is arranged to encapsulate the plurality of outputs in Ethernet frames. The emulation processor is arranged to encapsulate the plurality of outputs in Internet Protocol (IP) packets. The emulation processor is arranged to encapsulate the plurality of outputs using an application-layer protocol.

An emulation mechanism in the computer system is split between the plurality of computers and the console (e.g., see publication US 2005/0132022 of the present Application at paragraph [0038] and Fig. 1).

A number of new standards have recently been promulgated to permit accessing at least some I/O peripherals remotely, via packet networks. However, conventional computer systems are not oriented in such a way as to accommodate such a structure. (Application at page 1, line 13 to page 2, line 10).

An exemplary embodiment of the claimed invention, on the other hand, is directed to a computer system, where each of the plurality of computers further includes a plurality of on-board I/O device controllers, consisting of at least one LAN interface being directly coupled to the LAN and connected to the system controller, and an emulation processor, the emulation processor being directly coupled to the system controller, the emulation device including I/O trap logic being directly coupled to the system controller, the I/O trap logic being configured to intercept and trap a plurality of outputs sent by the at least one CPU to the plurality of I/O devices, to pass a plurality of inputs received from a service processor of the emulation device to the at least one CPU via the system controller, and to emulate behavior of the plurality of I/O devices to the at least one CPU and the system controller, and the service processor being directly coupled to the I/O trap logic, the service processor being configured to receive the intercepted and trapped plurality of outputs from the I/O trap logic, to encapsulate the received plurality of outputs into the outgoing data frames, to transmit the outgoing data frames via the at least one LAN interface through the LAN for delivery to the plurality of I/O devices, to receive the incoming data frames via the at least one LAN interface sent by the plurality of I/O devices through the LAN, to de-encapsulate the received incoming data frames into the plurality of inputs, and to convey the plurality of inputs to the I/O trap logic for emulation to the at least one CPU via the system controller. (Application at page 10, line 17 to page 12, line 2). This exemplary feature may provide a computer system having substantially increased board space and reduced power requirements, complexity, cost, and management effort. (Application at page 2, lines 25-29).

II.   THE DOUBLE PATENTING REJECTION

Claim 38 is provisionally rejected under 35 U.S.C. § 101 as allegedly claiming the same invention as that of claims 1-5, 8-11, 16-21, 39-42, and 44 of copending Application No. 12/062,211. Applicants respectfully traverse this rejection.

MPEP 804 (II)(A) states:

> "*In determining whether a statutory basis for a double patenting rejection exists, the question to be asked is: Is the same invention being claimed twice? 35 U.S.C. 101 prevents two patents from issuing on the same invention. "Same invention" means identical subject matter. Miller v. Eagle Mfg. Co., 151 U.S. 186 (1984); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Ockert, 245 F.2d 467, 114 USPQ 330 (CCPA 1957).*
>
> "*A reliable test for double patenting under 35 U.S.C. 101 is whether a claim in the application could be literally infringed without literally infringing a corresponding claim in the patent. In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970). Is there an embodiment of the invention that falls within the scope of one claim, but not the other? If there is such an embodiment, then identical subject matter is not defined by both claims and statutory double patenting would not exist. For example, the invention defined by a claim reciting a compound having a "halogen" substituent is not identical to or substantively the same as a claim reciting the same compound except having a "chlorine" substituent in place of the halogen because "halogen" is broader than "chlorine""* (emphasis added by Applicants).

Here, claim 38 of the present invention does **not** recite, "*each of the plurality of computers comprises a server blade,*" recited in independent claims 1, 8, and 17 of the 12/062,211 application.

Indeed, the Examiner does **not** even allege that claim 38 was rejected based on double patenting over the content of previous claim 43 of 12/062,211 (see Office Action at page 2, section 3, line 2), which in the Amendment filed on August 23, 2010 for 12/062,211, was incorporated into claims 1, 8, and 17 of the 12/062,211 application.

Therefore, the claims are **not** identical because claim 38 of present application lacks the above structures, and a later invention can infringe claim 38 without having the above structures to also infringe claims of the 12/062,211 application.

Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

III.   THE PRIOR ART REJECTION

In rejecting claims 38 and 39, the Examiner alleges that one of ordinary skill in the art would have combined Dai with Autrey to render obvious the claimed invention.

Applicants respectfully submit that the references would **not** have been combined as alleged by the Examiner and that, even if combined, the alleged combination of references would **not** teach

or suggest each and every feature of the claimed invention.

That is, Dai and Autrey, either alone or in combination (<u>arguendo</u>) fail to teach or suggest, "*wherein an emulation mechanism in the computer system is split between the plurality of computers and the console*," as recited in claims 38 and 39.

Indeed, the Examiner does <u>not</u> even allege that Dai or Autrey teaches or suggests this feature of the claimed invention.

Applicants submit that the claimed invention provides remote I/O (in this case the base I/O of a PC - i.e., the mouse, keyboard, display, floppy, and boot disk) without changing the software device drivers used to control and access these devices. This means that the remote and emulated I/O device must respond to the software running on the many computers that have only network interfaces exactly as if the remote I/O devices were local to these many machines. This feature is important since that there is no practical way to change the I/O device drivers, these device drivers are embedded in literally thousands of programs which would need to be modified if one changes the apparent interface to these I/O devices.

Further, in the claimed invention, there is an emulation device in each of the computers that is able to receive I/O commands from the unmodified software running on that computer and produce the same responses or interact with that software exactly as would be the case if the I/O device were conventionally attached to the computer using the expect standard hardware adapters.

As noted above, the expected behavior of the standard hardware adapters for locally attached base I/O (mouse, keyboard, display, floppy, CD drive and boot disk) are rigidly defines, well understood, and embedded in thousands of programs which one would like to run on these computer even though they no longer have dedicated I/O devices attached to them, but that these are shared by many computers.

The emulation of the I/O in the claimed invention has several parts. There is the software running in the many computers, and the part of the emulation device which is local to each of the many computers which receives the I/O commands from the software (called I/O trap logic directly coupled to the service processor). This local component provides the very detailed emulation of the device properties, and cooperates with the console computer that actually has the shared I/O devices (keyboard, mouse, etc.). When the emulation actually requires access to these devices, this local component in each of the many computers then encapsulates a command sends it off via the network

to the single shared console computer which completes the emulation by providing interaction with actual hardware.

The alleged references, however, fail to teach or suggest the splitting of the emulation responsibility between local components in the plurality of computers with no real I/O, and the central single console computer with a set of shared attached I/O, as defined in the claimed invention.

Dai's invention does the complete emulation of the device entirely at one end of this link. There is no emulation mechanism being done in any of the many computers side of the alleged LAN. Additionally or as a result, the software drivers in each of the many computers is completely aware that it is talking to and controlling a remote or across the LAN device. The emulation mechanism is entirely contained on the other side of the LAN where a single disk drive might be made to look like several drives. This split emulation then is not taught or suggested by Dai, nor is an ability to run unmodified drivers. Indeed, Dai's software drivers are new and tailored to the new I/O setup. In a real fashion this means that Dai does not teach any of the claim related to trapping I/O and the coupling to the service processor.

Furthermore, Applicants submit that similar to Dai, Autrey fails to teach or suggest the aforementioned feature of the claimed invention. Indeed, Autrey is merely cited for allegedly disclosing encapsulating of commands.

Since Autrey does not overcome the deficiencies of Dai, the combination of references fails to render the rejected claims obvious.

Moreover, Applicants respectfully submit that these references are unrelated and would <u>not</u> have been combined as alleged by the Examiner. Thus, a person of ordinary skill in the art would not have considered combining these disparate references, <u>absent impermissible hindsight</u>.

Further, Applicants submit that there is <u>no</u> motivation or suggestion in the references or elsewhere (and thus no predictability for one of ordinary skill in the art) to urge the combination as alleged by the Examiner. Indeed, these references clearly do not teach or suggest their combination. Therefore, Applicants respectfully submit that one of ordinary skill in the art would not have combined the references as alleged by the Examiner.

Therefore, Applicants respectfully submit that one with ordinary skill in the art would not have combined Dai with the teachings of Autrey, and even if combined, the alleged combination

does not teach or suggest (or render obvious) each and every feature of the claimed invention.
Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.
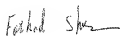

IV.   FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicants submit that claims 38 and 39, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, Applicants request the Examiner to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The undersigned authorizes the Commissioner to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 50-0510.

Respectfully Submitted,

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Date: 08/23/10

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